



2010 Candidate Information Bulletin

State of Alaska

Mechanical Administrator Examinations

The Department of Commerce, Community, and Economic Development (State of Alaska) in the Division of Corporations, Business and Professional Licensing, adopts regulations to carry out laws governing mechanical administrators in the State of Alaska.

The State of Alaska has contracted with Prometric Inc. to conduct its examination program. Be advised that passing the applicable exam is just one component of the requirements necessary in obtaining an Alaska mechanical administrator license. The State of Alaska has sole responsibility for making final licensing decisions.

At a glance

This bulletin is your guide to the process of taking Alaska mechanical administrator licensing examinations. The steps below summarize the process. For information about a step, go to the page listed.



To take the examination

- 1** Submit your exam registration form (on Page 11) and fee to Prometric. In return, you will receive an admission letter and exam appointment.
- 2** Prepare for your exam, using this bulletin and other materials—Page 6.
- 3** Present your admission letter and required identification; then take your exam—Page 3.



To get answers not provided in this bulletin

For questions about exams:



Prometric
 ATTN: AK Mechanical Administrator Program
 1260 Energy Lane, St. Paul, MN 55108
 Phone: 800.280.3926
 Fax: 800.813.6670
www.prometric.com/alaska

For questions about eligibility and licensing requirements:

State of Alaska, Department of Commerce,
 Community and Economic Development,
 Division of Corporations, Business and
 Professional Licensing
 P.O. Box 110806, Juneau, AK 99811-0806
 Phone: 907.465.2589
www.commerce.state.ak.us/occ/pmec.htm

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Key

-  Overview information
-  Important note

Registering for your exam(s)

Complete the examination registration form on Page 11 and send to Prometric, along with the exam registration fee (\$125), by mail or fax. Seating is limited, so submit your registration form early. The exam fee is nonrefundable and nontransferable.

Registration by mail

When registering by mail, you may pay the exam fee by including a Visa or MasterCard number, cashier's check or money order. **Personal checks and cash are not accepted.**

Registration by fax

If you are paying with a credit card, you may fax your completed exam registration form (Page 11) to Prometric at 800.813.6670. You must include the Visa or MasterCard number and the cardholder's signature.



Note Prometric must receive your registration form and fee on or before the cutoff date. If your registration form is received after the deadline, you will be scheduled for the next available date at the selected site.

Exam dates and registration cutoff dates

Exams are offered at several locations. These locations are subject to change.

Alaska exam and registration cutoff dates

Anchorage		Fairbanks		Juneau	
Cutoff	Exam	Cutoff	Exam	Cutoff	Exam
01/14/10	02/01/10	12/22/09	01/09/10	01/07/10	01/23/10
02/11/10	03/01/10	02/04/10	02/20/10	03/12/10	03/27/10
03/19/10	04/05/10	04/02/10	04/17/10	05/14/10	05/29/10
04/16/10	05/03/10	04/23/10	05/08/10	07/09/10	07/24/10
05/20/10	06/07/10	05/27/10	06/12/10	08/06/10	08/21/10
06/24/10	07/12/10	07/23/10	08/07/10	09/10/10	09/25/10
07/16/10	08/02/10	08/26/10	09/11/10	10/08/10	10/23/10
09/17/10	10/04/10	09/24/10	10/09/10	11/05/10	11/20/10
11/17/10	12/06/10	10/29/10	11/13/10	12/03/10	12/18/10

Out-of-state testing. Outside of Alaska, you can test at a Prometric location on any date when testing is scheduled. Contact Prometric for more information.

Special consideration

ADA accommodation. If you require testing accommodations under the Americans with Disabilities Act (ADA), please call Prometric at 800.280.3926 to obtain an accommodation request form. Reasonable testing accommodations are provided to allow candidates with documented disabilities recognized under the ADA an opportunity to demonstrate their skills and knowledge.

Submit professional documentation of your disability with your request form to help us determine the necessary testing arrangements. Thirty days' advance notice is required for all special testing arrangements. There is no additional charge for these accommodations.

ESL note. If English is your second language, please note that a language barrier is not considered a disability.

Admission letters

If your registration form and payment are received by the cutoff deadline, Prometric will send you an admission letter. This letter provides information regarding the specific date, time and location of your exam. You **must** present this letter at the testing center or you will not be allowed to test.

You should receive your admission letter approximately five business days before the exam. If you lose your admission letter or have not received it three days before the exam, call Prometric immediately at 800.280.3926 to provide a fax number. Prometric will fax an admission letter to you. Be sure to notify Prometric and the state of any change of address.

Rescheduling an appointment

Once your exam has been scheduled, you must take it on the scheduled date or you will forfeit your exam fees. With enough advance notice, though, you may be able to reschedule your exam.

Up to the cutoff date, you can call 800.280.3926 to reschedule if space is available on the new date. The rescheduling fee is \$15. Payment must be received prior to the cutoff date for the exam date for which you are currently registered.



Note Once the cutoff date has passed, Prometric is unable to reschedule your exam and fees will not be refunded.

Emergency closings

Severe weather or an emergency could require canceling scheduled exams. If this occurs, Prometric will attempt to contact you by phone or e-mail. However, you may check for testing site closures by calling Prometric. If the site is closed, your exam will be rescheduled without a rescheduling fee.

If a testing center is open for testing and you choose not to appear for your appointment, you will forfeit your fee. You must then reschedule your exam and pay another full exam fee.

What to bring on exam day

Exams begin promptly at the time shown on the admission letter. You should arrive at the test center approximately 30 minutes before testing begins. This allows time for you to sign in and for Prometric staff to verify your identification. Only preregistered candidates are admitted to the exam.

Bring all the following items with you to your exam appointment:

- Your admission letter from Prometric.
- A current, valid, government-issued photo identification card, such as a driver's license or a state-issued identification card.
- Two sharpened No. 2 pencils.
- A silent, nonprinting, nonprogrammable calculator (calculators capable of alphabetic entry **cannot** be used). If you are unsure whether your calculator is appropriate, bring a simple six-function calculator to the exam site as a backup.
- Approved reference materials.



Important Failure to provide appropriate identification and your admission letter at the time of the exam is considered a missed appointment. If you miss an appointment, you forfeit your fees.

Testing regulations

To ensure that all candidates are tested under equally favorable conditions, the following regulations and policies will be observed at each testing center. Failure to follow any of these security procedures may result in disqualification of your exam. Prometric reserves the right to audiotape and videotape any examination session.

- References**
- Only approved references are allowed during the exam. Photocopies of reference materials may **not** be used. No handwritten or additional notes (letters, words, diagrams, etc.) are allowed in reference books. Any reference material that has been written in during the exam will be confiscated.
 - Highlighting and permanent tabbing added before your arrival at the test center are acceptable. Post-it® notes are not considered permanent tabbing and will not be allowed. Sharing reference materials is not allowed.
 - No other reference materials, papers or study materials are allowed at the test center. If you are found with these or any other aids, you will not be allowed to continue the exam and your answers will not be scored.

- Calculators**
- A calculator or slide rule is allowed. Only silent, handheld, solar or battery-operated, nonprogrammable calculators (without paper tape-printing capabilities or alphabetic keypads) may be used.

- Personal items** We recommend that you avoid bringing personal items to the testing center. Note the following:
- Electronic equipment—cameras, tape recorders, cell phones, PDAs, pagers, etc.—is not permitted in the testing area.
 - Pocket items—keys, wallet, etc.—must remain in your pocket during testing.
 - Other personal items—watches, briefcases, backpacks, etc.—are not permitted in the testing area. **Note:** It is recommended that purses not be brought to the testing center as access to purses will not be allowed during testing.

- Breaks**
- If you leave the testing room while an exam is in progress, you must sign out/in on the roster and you will lose exam time.
 - You are not allowed to use any electronic devices or phones during breaks.

- Visitors**
- No guests, visitors or family members are allowed in the testing area.

- Misconduct or disruptive behavior**
- Candidates who engage in any kind of misconduct or disruptive or offensive behavior may be dismissed from the examination. Examples are: giving or receiving help, taking part in an act of impersonation, removing test materials or notes from the testing room, using rude or offensive language and behavior that delays or interrupts testing.

- Weapons**
- Weapons are not allowed at the testing center.



Important Before an exam begins, the test center administrator will inspect all references, briefcases, purses, and so on. The administrator will collect any materials that violate the rules.

If questions arise. Test center administrators are not allowed to answer any questions pertaining to the exam content. If you do not understand a question on the examination, you should answer the question to the best of your ability.

Your exam results

A score of 70 percent or above is required to pass each exam. Scores are based on the number of questions answered correctly. You will not be given credit for any question answered incorrectly, marked with more than one answer or left blank. There is no penalty for guessing, so be sure to mark an answer for each question.

Score report. A score report will be mailed to you four to six weeks after your exam date. To ensure confidentiality, scores will **not** be disclosed over the phone. All score reports are mailed simultaneously.

Retake information. If you do not pass the exam, retake procedure information will be included with the score report.



Important If you take an exam and fail, you must wait at least 30 days from the date you took the exam before you can schedule a retake exam.

Appeals process

Our goal is to provide a quality exam and a pleasant testing experience for every candidate. If you are dissatisfied with either and believe we can correct the problem, we would like to hear from you. We provide an opportunity for general comments at the end of your exam. Your comments will be reviewed by our personnel, but you will not receive a direct response.

If you are requesting a response about exam content, registration, scheduling or test administration (testing site procedures, equipment, personnel, etc.), please submit an appeal in writing. Your appeal letter must provide your name and Social Security number, the exam title, the date you tested and the details of your concern, including all relevant facts. Be sure to include your signature and return address. Mail your appeal letter to:

Prometric
ATTN: Appeals Committee
1260 Energy Lane
St. Paul, MN 55108

The Appeals Committee will review your concern and send you a written response within 10 business days of receipt. **Faxed appeals are not accepted** because an original signature is required.

Optional services

This section describes optional services that Prometric provides.

Certificate of achievement

Candidates passing their exams deserve recognition for their accomplishment. Prometric has prepared a beautifully designed 8.5"×11" certificate of achievement. This certificate is suitable for framing and contains your name and the name of the exam you successfully completed in a calligraphy typeface. Prometric will send a certificate order form with the score report to passing candidates. The cost is \$25.

Strength and weakness report

If you do not pass the exam, you may request a strength and weakness report. This report is a useful guide that pinpoints where you need to concentrate your study efforts before retaking the exam. It shows how many questions were included in each subject area and how many questions you answered correctly in each area. Information on how to obtain the strength and weakness report will be mailed with your score report. The fee for a strength and weakness report is \$20.

Exam reviews

If you do not pass your exam, you can register for an optional review of it. The review is a study session that is conducted much like an exam. You must request an exam review within 30 days of the date exam results were mailed. The review must be completed at least 30 days before the same test is retaken. To review an exam, contact Prometric. The fee for an exam review is \$75.

Exam content outlines

Following are the content outlines for the Alaska mechanical administrator exams. Each outline indicates the total number of questions on the exam and the maximum time allowed. It also lists all topics covered in the exam and the approximate percentage of questions asked about each topic.

Exam references. Each outline lists references that were used to develop the exams, including those references that may be used during the exam. **Some information found in the references does not apply to the exams.** The *Alaska Mechanical Administrator Statutes and Regulations (AS 08.40 and 12 AAC 39)* reference is recommended for the state-specific portion of the exam. For information on how to obtain exam references, call toll-free 877.624.2562.

**Heating, Cooling, and Process Piping Mech.
Open Book, 112 questions, 4 hours**

Scope – 12 AAC 39.232. Scope of a Mechanical Administrator License in the Heating, Cooling, and Process Piping Category.

- (a) The holder of a mechanical administrator license in the heating, cooling, and process piping category may supervise all work described in (b) of this section in accordance with AS 08.40.400.
- (b) Heating, cooling and process piping work includes the installation, alteration, or retrofitting of
 - (1) hydronic heating, cooling, and process piping systems, including steam and hot water systems of any temperature-pressure range, chilled water systems, condensing water systems, pressure vessels, heat exchangers, boilers, refrigeration water chillers, cooling towers, fuel oil tanks and piping, and fuel gas piping; and
 - (2) steam and hot water boilers, including chimney connections, flues, refractories, burners, fittings, valves, thermal insulation, controls, accessories, and incidental piping.
- (c) A mechanical administrator licensed in the heating, cooling, and process piping category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all pneumatic or electric controls and the retrofitting of all control wiring of 48 volts or less necessary for the operation of heating, cooling, and process piping equipment and systems so long as those modifications do no alter the electrical characteristics of the mechanical system or controls. The original installation of control wiring, or the alteration of retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

Subject Area	Percent
Piping	20
Boilers	15
Chillers	15
Chimneys, Flues and Vents	15
Combustion Air	10
Alaska Statutes and Regulations	10
Controls	8
Testing and Inspections	7

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>International Mechanical Code</i> , 2006 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org .
3	<i>NFPA 31 – Standard for the Installation of Oil Burning Equipment</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
4	<i>NFPA 54 – National Fuel Gas Code</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .

References not allowed during the exam	
1	<i>Control Systems For Heating, Ventilating, and Air Conditioning</i> , Sixth Edition, 2003, Kluwer Academic Publishers, Order Department, P.O. Box 358, Accord Station Hingham, MA 02018-0358.
2	<i>High Pressure Boilers</i> , Third Edition, 2003, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
3	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
4	<i>Modern Hydronic Heating for Residential and Light Commercial Buildings</i> , Second Edition, 2004, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .
5	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com .
6	<i>Modern Welding</i> , 2004 Edition, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com .
7	<i>Mathematics for Plumbers and Pipefitters</i> , Seventh Edition, 2008, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .

Mech. Admin. Unlimited Com. and Ind. Plumbing
Open Book, 100 questions, 4 hours

Scope – 12 AAC 39.212. Scope of a mechanical administrator license in the unlimited commercial and industrial plumbing category.

- (a) The holder of a mechanical administrator license in the unlimited commercial and industrial plumbing category may supervise, in accordance with AS 08.40.400,
 - (1) all plumbing work described in (b) of this section;
 - (2) the work defined under the heating, cooling, and process piping category in 12 AAC 39.232(b);
 - (3) the work defined under the mechanical systems temperature control category in 12 AAC 39.292; and
 - (4) the work defined under the residential plumbing and hydronic heating category in 12 AAC 39.312(b).
- (b) Plumbing work includes the installation, alteration, or retrofitting of
 - (1) plumbing, fixtures, fixture traps, and domestic water, waste, storm, and vent pipes, including all of their devices, appurtenances, and connections, that extend no more than five feet horizontally outside the building or structure that they serve, and through which domestic water, waste, sewage, oil, drainage, and air are carried;
 - (2) piping, fixtures, or equipment that is an integral part of a swimming pool, spa, or hot tub filter or heating system, or solar energy system;
 - (3) fuel oil and gas piping and appliances, and their appurtenances either within the property lines of the building or structure to be served by the fuel oil and gas, or to the point of connection with the utility system; and
 - (4) lawn sprinkler systems that are connected to a potable water supply, including excavation and backfilling as necessary for proper installation of the system.
- (c) In this section “fixtures” includes water closets, lavatories, bathtubs, showers, kitchen sinks, laundry trays, hot water tanks, softeners, urinals, bidets, service sinks, shower pans, drink fountains, water pumps, water conditioners, water coolers, and other similar fixtures used in water systems.
- (d) A mechanical administrator licensed in the unlimited commercial and industrial plumbing category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all pneumatic or electric controls, and may supervise, in accordance with AS 08.40.400, the retrofitting of all control wiring of 48 volts or less, necessary for the operation of plumbing or water conditioning equipment so long as those modifications do not alter the electrical characteristics of the mechanical system or controls. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

Subject Area	Percent
General Knowledge	22
Alaska Statutes and Regulations	10
Drainage, Waste and Sanitary Vents	14
Fuel Gas and Oil	14
Water Piping and Softening Systems	10
Specialty Plumbing	8
Plumbing Fixtures	6
Roof Drain Piping	6
Isometric Analysis	10

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>Uniform Plumbing Code</i> , 2006 Edition, International Association of Plumbing and Mechanical Officials (IAPMO), 5001 East Philadelphia Street, Ontario, CA 91761-2816, www.iapmo.org .

References not allowed during the exam	
1	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
2	<i>Mathematics for Plumbers and Pipefitters</i> , Seventh Edition, 2008, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .
3	<i>Modern Hydronic Heating for Residential and Light Commercial Buildings</i> , Second Edition, 2004, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .
4	<i>Plumbing Design and Installation</i> , Third Edition, 2006, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
5	<i>Residential Oil Burners</i> , Second Edition, 2001, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .

Residential HVAC
Open Book, 65 questions, 2 hours

Scope – 12 AAC 39.332 Scope of a Mechanical Administrator License in the Residential HVAC Category.

- (a) The holder of a mechanical administrator license in the residential HVAC category may supervise all work described in (b) of this section in accordance with AS 08.40.400.
- (b) Residential HVAC includes the installation, alteration, or retrofitting of
 - (1) fuel gas piping downstream of the gas meter, or fuel tank and fuel oil piping that is integral to work on an HVAC system for a single-family dwelling or a duplex dwelling not exceeding three stories; and
 - (2) warm air heating systems not exceeding 240,000 B.T.U./hour input.
- (c) A mechanical administrator licensed in the residential HVAC category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all plug-in type electrical control panels and apparatus, and may supervise the retrofitting of all control wiring of 48 volts or less, in a residential single-family dwelling or a duplex dwelling not exceeding three stories so long as those modifications do not alter the electrical characteristics of the mechanical

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system or controls. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

(d) Nothing in this section prohibits a mechanical administrator licensed in the unlimited HVAC/sheet metal category, as described in 12 AAC 39.252, from performing or supervising mechanical work on a residential dwelling.

Subject Area	Percent
Alaska Statutes and Regulations	18
Burners	12
Controls	12
Air Conditioning Systems	12
Fuel Piping/Storage	11
Chimneys	11
Sheet Metal/Duct Systems	11
Testing and Inspections	8
Evaporative Cooling	5

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>International Mechanical Code</i> , 2006 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org .
3	<i>NFPA 31 – Standard for the Installation of Oil Burning Equipment</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
4	<i>NFPA 54 – National Fuel Gas Code</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .

Reference not allowed during the exam	
1	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com .

Residential Plumbing and Hydronic Heating
Open Book, 100 questions, 4 hours

Scope – 12 AAC 39.312 Scope of a mechanical administrator license in the residential plumbing and hydronic heating category.

(a) The holder of a mechanical administrator license in the residential plumbing and hydronic heating category may supervise, in accordance with AS 08.40.400, all work described in (b) of this section for a single-family dwelling, or a duplex dwelling not exceeding three stories.

(b) Residential plumbing and hydronic heating work includes the installation, alteration, or retrofitting of

(1) plumbing, fixtures, and water conditioners for a single-family dwelling, or a duplex dwelling not exceeding three stories;

(2) hot water heating systems not exceeding 50 P.S.I. working pressure for a single-family dwelling, or a duplex dwelling not exceeding three stories;

(3) existing plumbing systems, including fixtures, softener installation, and accessories;

(4) fuel gas piping downstream of the gas meter, or fuel tank and fuel oil piping for a single-family dwelling, or a duplex dwelling not exceeding three stories; and

(5) lawn sprinkler systems that are connected to a potable water supply, including excavation and backfilling as necessary for proper installation of the system.

(c) A mechanical administrator licensed in the residential plumbing and hydronic heating category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all plug-in type electrical control panels and apparatus and the retrofitting of all control wiring of 48 volts or less, in a residential single-family dwelling, or a duplex dwelling not exceeding three stories so long as those modifications do not alter the electrical characteristics of the mechanical system or controls. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

(d) Nothing in this section prohibits a mechanical administrator licensed in the unlimited commercial and industrial plumbing category, as described in 12 AAC 39.212, or in the heating, cooling, and process piping category, as described in 12 AAC 39.232, from performing or supervising mechanical work on a residential dwelling.

Subject Area	Percent
General Knowledge	22
Alaska Statutes and Regulations	10
Drainage, Waste and Sanitary Vents	14
Fuel Gas and Oil Piping	14
Water Piping and Backflow Prevention	10
Specialty Plumbing	8
Plumbing Fixtures	6
Hydronic Heating	6
Isometric Analysis	10

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>Uniform Plumbing Code</i> , 2006 Edition, International Association of Plumbing and Mechanical Officials (IAPMO), 5001 East Philadelphia Street, Ontario, CA 91761-2816, www.iapmo.org .

References not allowed during the exam	
1	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
2	<i>Mathematics for Plumbers and Pipefitters</i> , Seventh Edition, 2008, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .

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3	<i>Modern Hydronic Heating for Residential and Light Commercial Buildings</i> , Second Edition, 2004, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.
4	<i>Plumbing Design and Installation</i> , Third Edition, 2006, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.
5	<i>Residential Oil Burners</i> , Second Edition, 2001, Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.

**Temp Control Administrator
Open Book, 62 questions, 2 hours**

Scope – 12 AAC 39.292. Scope of a Mechanical License in the Mechanical Systems Temperature Control Category.

The holder of a mechanical administrator license in the mechanical systems temperature control category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all pneumatic or electric controls and the retrofitting of all control wiring of 48 volts or less necessary for all mechanical systems described in this chapter so long as those modifications do not alter the electrical characteristics of the mechanical system. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

Subject Area	Percent
Electricity/Electronics	23
Alaska Statutes and Regulations	19
HVAC Unit Controls	14
Pneumatics	12
Terminology	8
Piping and Tubing	8
Sizing and Estimating	8
Testing and Inspecting	8

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ.
2	<i>International Mechanical Code</i> , 2006 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.

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1	<i>Control Systems For Heating, Ventilating, and Air Conditioning</i> , Sixth Edition, 2003, Kluwer Academic Publishers, Order Department, P.O. Box 358, Accord Station Hingham, MA 02018-0358.
2	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.

**Unlimited HVAC/Sheet Metal Mechanical
Open Book, 112 questions, 4 hours**

Scope – 12 AAC 39.252. Scope of a Mechanical Administrator License in the Unlimited HVAC/Sheet Metal Category.

- (a) The holder of a mechanical administrator license in the unlimited HVAC/sheet metal category may supervise, in accordance with AS 08.40.400, (1) all HVAC/sheet metal work described in (b) of this section; (2) the work defined under the heating, cooling, and process piping category in 12 AAC 39.232(b) that is integral to work on an HVAC system; (3) the work defined under the mechanical systems temperature control category in 12 AAC 39.292 that is integral to work on an HVAC system; and (4) the work defined under the residential HVAC category in 12 AAC 39.332(b).
- (b) HVAC sheet/metal works includes the installation, alteration, or retrofitting of the following as they apply to HVAC systems only: (1) all components of the air handling and refrigeration cycle, including fans, coils, evaporative cooling units, self-contained packaged air conditioning and heating units, air handling units, condensing units, furnaces, flues, chimneys, duct work, cooled mechanical air handling and ventilation applications, and related accessories: (2) fuel oil tanks and piping and fuel gas piping.
- (c) A mechanical administrator licensed in the unlimited HVAC/sheet metal category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all pneumatic or electric controls and the retrofitting of all control wiring of 48 volts or less necessary for the operation of HVAC equipment or systems so long as those modifications do not alter the electrical characteristics of the mechanical system or controls. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.
- (d) A mechanical administrator licensed in the unlimited HVAC/sheet metal category is not authorized to install or supervise the installation of piping other than fuel oil and fuel gas piping, refrigerant piping, chilled water piping, and condensing water piping that is integral to work on an HVAC system.
- (e) Only sheet metal work directly related to heating, ventilation, and air conditioning systems, and any work covered by the Uniform Mechanical code, is required to be supervised by a mechanical administrator licensed in the HVAC/sheet metal category defined in this section.

Subject Area	Percent
Boilers/Burners	15
Chimneys, Flues and Vents	15
Fuel, Piping and Storage	15
Controls/Electrical	10
Duct Systems/Sheet Metal	10
Alaska Statutes and Regulations	10
Steam/Hot Water Piping	8
A/C Systems	5
Piping/Tubing	4
Chillers	4
Pneumatics	3
Evaporative Cooling	1

EXAM CONTENT OUTLINES

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>International Mechanical Code</i> , 2006 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org .
3	<i>NFPA 31 – Standard for the Installation of Oil Burning Equipment</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
4	<i>NFPA 54 – National Fuel Gas Code</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org .

References not allowed during the exam	
1	<i>Control Systems For Heating, Ventilating, and Air Conditioning</i> , Sixth Edition, 2003, Kluwer Academic Publishers, Order Department, P.O. Box 358, Accord Station Hingham, MA 02018-0358.
2	<i>High Pressure Boilers</i> , Third Edition, 2003, American Technical Publishers (ATP), 1155 West 175 th Street, Homewood, IL 60430-4600, www.go2atp.com .
3	<i>HVAC Duct Construction Standards – Metal and Flexible</i> , Third Edition, 2005, Sheet Metal and Air Conditioning Contractors National Association (SMACNA), 4201 Lafayette Center Drive, Chantilly, VA 22022-1230, www.smacna.org .
4	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175 th Street, Homewood, IL 60430-4600, www.go2atp.com .
5	<i>Sheet Metal</i> , Second Edition, 2006, American Technical Publishers (ATP), 1155 West 175 th Street, Homewood, IL 60430-4600, www.americantech.net .

<p>Unlimited Refrigeration Open Book, 112 questions, 4 hours</p>

Scope – 12 AAC 39.272. Scope of a Mechanical Administrator License in the Unlimited Refrigeration Category.

(a) The holder of a mechanical administrator license in the unlimited refrigeration category may supervise, in accordance with AS 08.40.400, the installation, alteration, or retrofitting of refrigeration and air conditioning equipment and systems, unlimited as to thermal capacity or type of refrigerant, including the installation of domestic water piping from an existing valved connection to the system, tower and condensing water piping, and chilled water piping. Work under this category is limited to the refrigerant cycle, controls, and related appurtenances.

(b) A mechanical administrator licensed in the unlimited refrigeration category may supervise, in accordance with AS 08.40.400, the installation or retrofitting of all pneumatic or electric controls and the retrofitting of all control wiring of 48 volts or less necessary for the operation of refrigeration systems so long as those modifications do not alter the electrical characteristics of the mechanical system or controls. The original installation of control wiring, or the alteration or retrofitting of controls and control wiring that alters the electrical characteristics of the mechanical system, must be supervised by an electrical administrator licensed in the appropriate category under 12 AAC 32.

Subject Area	Percent
Component Knowledge	21
Testing	15
Piping and Tubing	14
Commercial Refrigeration Systems	14
Alaska Statutes and Regulations	11
Controls	10
Evacuation and Charging	8
Sizing	7

References allowed during the exam	
1	<i>Alaska Mechanical Administrators Statutes and Regulations</i> , July 2005, Alaska Department of Commerce, Community and Economic Development, Division of Corporations, Business and Professional Licensing, P.O. Box 110806, Juneau, AK 99811-0806, www.commerce.state.ak.us/occ .
2	<i>International Mechanical Code</i> , 2006 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org .

References not allowed during the exam	
1	<i>Control Systems For Heating, Ventilating, and Air Conditioning</i> , Sixth Edition, 2003, Kluwer Academic Publishers, Order Department, P.O. Box 358, Accord Station Hingham, MA 02018-0358.
2	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com .
3	<i>Pipefitters Handbook</i> , Third Edition, 1967, Industrial Press, Inc., 200 Madison Avenue, New York, NY 10016, www.industrialpress.com .



Exam Registration Form for Alaska Mechanical Administrator exams

Candidate Information

Last Name	First Name	Middle Initial	Social Security Number ____ - ____ - _____
Street Address (including Apt. number or P.O. Box, if applicable)			
City		State	ZIP Code
Daytime Phone Number (including area code) ()		Business Phone Number (including area code) ()	

Exam Selection and Fees

Exam Title	Exam Fee	Total
Heating, Cooling, and Process Piping Mech.	\$125	\$
Mech. Admin. Unlimited Commercial and Industrial Plumbing	\$125	\$
Residential HVAC	\$125	\$
Residential Plumbing and Hydronic Heating	\$125	\$
Temp Control Administrator	\$125	\$
Unlimited HVAC/Sheet Metal Mechanical	\$125	\$
Unlimited Refrigeration	\$125	\$
	Total Fee	\$

Payment: Fee may be paid by cashier's check, money order, MasterCard or Visa, payable to Prometric. Please put your full name on the check. **Personal checks and cash are not accepted. Fees are nonrefundable.** To pay by credit card, please complete the information below. Please see complete registration and scheduling information in this bulletin.

Card Type (Check One) <input type="checkbox"/> MasterCard <input type="checkbox"/> Visa	Card Number	Expiration Date
Name of Cardholder (Print)	Signature of Cardholder	

Exam Date and Location Selection

Indicate your preferred testing date and location. (See schedule of exam dates listed in this bulletin on Page 2.)

	Exam Date	Location
First Choice		
Second Choice		

By signing and submitting this form, I certify that I am the candidate named above and I agree to comply with all examination rules and regulations.

Signature: _____ Date: _____

(Keep a copy of this registration form for your records.)

To register by mail, send this completed form with the appropriate fee to:

Prometric
ATTN: AK Mechanical Administrator Program
1260 Energy Lane
St. Paul, MN 55108